

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

By way of this Amendment, independent Claims 1 and 24 are amended, and new independent Claim 28 is presented for consideration. Thus, the claims currently pending in this application are Claims 1-21 and 23-28. Claims 4-11 remain withdrawn from consideration as being directed to the non-elected species. Claims 1-3, 12-21 and 23-28 are readable on the elected species. Of those claims, Claims 1, 24 and 28 are the only independent claims.

It is understood from the most recent Official Action that the continued rejection of independent Claim 1 in light of the disclosure in U.S. Patent No. 6,001,068 to *Uchino et al.* is based on the position that the wire A forming a part of the disclosed guide wire can be said to be reshaping and plastically deformable to a desired shape and maintained in the desired shape upon being bent in the desired shape by a user. To address this point and more clearly define differences between the guide wire recited in independent Claim 1 relative to the disclosure in *Uchino et al.*, Claim 1 is amended to define that the first wire disposed on the distal side of the guide wire is made from a reshaping and non-superelastic metal material. As explained previously, the superelastic material mentioned in *Uchino et al.* is not well suited to being plastically deformed to a desired shape and maintained in the desired shape upon being bent the desired shape by a user (e.g., the user's fingers). This recitation in Claim 1 that the first wire is made from a reshaping and non-superelastic metal material distinguishes over *Uchino et al.*'s disclosure that the wire

A is made of a superelastic alloy. It is thus respectfully submitted that independent Claim 1 is patentable over the disclosure in *Uchino et al.* for at least this reason.

With respect to independent Claim 24, this claim is also amended to recite that the first wire disposed on the distal side of the guide wire is made from a reshaping and non-superelastic metal material. Thus, the claimed guide wire differs from *Uchino et al.*'s guide wire for reasons similar to those noted above with respect to Claim 1.

In addition, the Official Action recognizes that *Uchino et al.* does not disclose first and second wires welded to each other at a welded portion located on the distal side of the proximal end of the spiral coil. The Official Action thus relies upon the disclosure in U.S. Patent No. 5,769,796 to *Palermo et al.* In particular, the Official Action refers to Fig. 4 of *Palermo et al.* which illustrates a guide wire in which an end cap 110 is connected to the distal tip portion 124 of the guidewire by way of a metallic ribbon 126. The metallic ribbon 126 is soldered at a solder joint 128 to the surrounding wire coil 112 and to the distal tip portion 124 of the guidewire. To the extent it can be said that *Palermo et al.* discloses anything relevant to the guidewire disclosed in *Uchino et al.*, it is simply that an end cap can be connected to the distal tip portion of a guidewire by way of a metallic ribbon which is soldered to both a surrounding coil and the distal tip portion of the guidewire by way of a solder joint. However, this disclosure in *Palermo et al.* is not a teaching that the welded joint described in *Uchino et al.* should be located on the distal side of the proximal end of the coil. That is, *Palermo et al.* does not teach that two wires (i.e., the wires A, B in *Uchino et al.*) which are welded together to form a guidewire should be welded together at a weld joint that is located on the distal side of the proximal end of a

spiral coil. Indeed, the reason Palermo et al.'s solder joint 128 is located relative to the coil 112 in the manner shown in Fig. 4 is because the metallic ribbon 126 is soldered to the coil 112 as clearly stated in the discussion in the first full paragraph in column 6 of *Palermo et al.*

Notwithstanding the foregoing, to better set forth differences between the guidewire at issue here and the modified guidewire in *Uchino et al.* that would result if one were somehow motivated to incorporate the disclosure in *Palermo et al.*, Claim 24 is amended to recite that the welded portion at which the first and second wires are joined to each other comprises a fused layer formed by the first and second wires. This aspect of the guide wire at issue here is discussed near the top of page 21 of the present application. Quite clearly, *Palermo et al.*'s disclosure of soldering a metallic ribbon to the distal tip portion of the guidewire and the surrounding coil at a solder joint is not a disclosure of a welded portion comprising a fused layer formed by materials of the first and second wires as claimed. It is thus respectfully submitted that independent Claim 24 is further distinguishable over a combination of the disclosures in *Uchino et al.* and *Palermo et al.*.

Dependent Claims 2 and 12 recite the third wire disposed on the proximal side of the second wire, and recite that the third wire is made from a material having an elastic modulus larger than the elastic modulus of the material forming the second wire. Addressing these claims, the Official Action relies upon the disclosure in U.S. Patent No. 5,365,943 to Jansen. Here, the Official Action notes Jansen's disclosure of a guidewire having three sections -- a proximal section 44, an intermediate section 46 and a distal section 48. However, a careful reading of the disclosure in *Jansen* reveals that the disclosed guidewire is specifically constructed to provide a guidewire

that is "anatomically matched and is adapted to maximize those characteristics of the guidewire that are desirable in the corresponding three distinct sections of the arterial and coronary vasculature when the guidewire is in its normal range of positions in that vasculature" (see, for example, the discussion in column 4, lines 30-36 of *Jansen*). *Jansen* then goes on to describe the particular materials selected to achieve that objective. However, *Jansen* further explains that the materials used to form the different sections are not capable of being welded together and so the sections are connected by an appropriate adhesive. This is discussed at, for example, column 7, lines 49-57 of *Jansen* and at various places in column 8.

Thus, to the extent one would have found the disclosure in *Jansen* to be applicable to the guidewire disclosed in *Uchino et al.*, the disclosure in *Jansen* taken as a whole describes utilizing particular materials for purposes of achieving the disclosed objectives. Using those materials, the resulting guidewire would not include the welded portion between the first and second wires as recited in Claims 1 and 24, and would also not include the welded portion recited in dependent Claim 2. It is thus respectfully submitted that the obviousness rejection relying upon the disclosure in *Jansen* and the disclosure in *Uchino et al.* is improper and should be withdrawn.

New independent Claim 28 defines that the guide wire comprises a first wire disposed on the distal side of the guide wire and made from a reshaping metal material, with the first wire being configured to be plastically deformed to a desired shape and maintained in the desired shape upon being bent in the desired shape by a user, and a second wire disposed on the proximal side from the first wire and made from a pseudo-elastic alloy. In addition, the first wire and the second wire are

joined to each other by welding, and the first wire is made from a material having an elastic modulus larger than the elastic modulus of the material forming the second wire. A third wire which is joined to the second wire is disposed on the proximal side from the second wire and is made from a material having an elastic modulus larger than the elastic modulus of the material forming the second wire.

Addressing other claims in this application, the Official Action relies upon *Jansen* for its disclosure of wires having different elastic modulus. In particular, the Official Action notes that *Jansen* discloses a proximal section made of a material having the largest elastic modulus. However, as recited in new independent Claim 28, the first wire is made from a material having an elastic modulus larger than the elastic modulus of the material forming the second wire, and the third wire is made from a material having an elastic modulus larger than the elastic modulus of the material forming the second wire. This differs from the particular construction disclosed in *Jansen* where the distal section is made of a material possessing the smallest modulus of elasticity. *Uchino et al.* does not specifically describe the modulus of elasticity characteristics of the materials forming the two sections and moreover discloses a superelastic alloy for the distal portion and stainless steel for the proximal portion.

It is respectfully submitted that new independent Claim 28 is also allowable. Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful

in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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